

**Flood Control Project Maintenance
Levee Inspections**

Fall 2014 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including USACE Erosion Survey

Sacramento River Basin

NA0008	Overall LMA Rating	Total LMA Miles	* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.					
Knights Landing Ridge Drainage District	M *	12.39						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Vegetation		0.01	0.04	0.32%				
Encroachments	0.24		0.24	1.94%	0.08			
Erosion / Bank Caving	0.01	0.02	0.09	0.73%				
<i>Supplemental</i>								
USACE Erosion Survey	0.07		0.07	0.57%				
DWR UCIP Field Study					0.10	0.02		
<i>LMA Totals:</i>	0.32	0.03	0.44	3.55% *	0.18	0.02	0.00	0.00
Unit No. 01 Knights Landing Ridge Cut RB	Overall Unit Rating	Total Unit Miles						
NA0008	A	6.36						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Encroachments	0.24		0.24	3.78%				
Erosion / Bank Caving	0.01		0.01	0.16%				
<i>Supplemental</i>								
USACE Erosion Survey	0.02		0.02	0.32%				
DWR UCIP Field Study					0.06	0.01		
<i>Unit Totals:</i>	0.27	0.00	0.27	4.25%	0.06	0.01	0.00	0.00
Unit No. 02 Knights Landing Ridge Cut LB	Overall Unit Rating	Total Unit Miles	* Overall Unit Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall Unit Rating is M instead of A.					
NA0008	M *	6.03						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Vegetation		0.01	0.04	0.66%				
Encroachments					0.08			
Erosion / Bank Caving		0.02	0.08	1.33%				
<i>Supplemental</i>								
USACE Erosion Survey	0.05		0.05	0.83%				
DWR UCIP Field Study					0.04	0.01		
<i>Unit Totals:</i>	0.05	0.03	0.17	2.82% *	0.12	0.01	0.00	0.00

**Flood Control Project Maintenance
Levee Inspections**
LMA District Cover Sheet
Fall 2014 Levee Inspection Results

Knights Landing Ridge Drainage District

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)
* Overall LMA Rating (Fall Only)			M	

** Non-receipt of Summer or Winter Inspection Reports may effect overall annual rating.

*

SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports. This rating is not intended to be an indication of risk.

Comments

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2014 Levee Inspection Results

Knights Landing Ridge Drainage District

Waterway			Bank	Unit Miles
Unit No. 01 Knights Landing Ridge Cut			Right	6.36
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	03/25/2014 - 03/25/2014		10/29/2014 - 10/29/2014	
DWR Inspector	John Williamson		Clay Thomas	
Accompanied By	Chad Navarrot RD 108		Chad Navarrot RD 108	

Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- completion of the inspection
- any changes other than the results of normal maintenance
- corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/29/2014 10/29/2014	Clay Thomas

LM Start		Rating **	A	Issue No.	3
LM End		Issue Type +	Ma	Location *	N/A
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Operations & Maintenance Manuals				°
					°
DWR ID	DWR_NA0008_01_s_2013_3				
Action/Comments					
Inspector Comments: District has levee manuals.					

No Photos

LM Start		Rating **	A	Issue No.	8		
LM End		Issue Type +	Ma	Location *	N/A		
Category	Earthen Levee			GPS Latitude/Longitude			
				Start		End	
Item	Emergency Supplies & Equipment				°		°
					°		°
DWR ID	DWR_NA0008_01_s_2013_8						
Action/Comments							
Inspector Comments: District maintains a stockpile of flood response material.							

No Photos

LM Start		Rating **	A	Issue No.	9		
LM End		Issue Type +	Ma	Location *	N/A		
Category	Earthen Levee			GPS Latitude/Longitude			
				Start		End	
Item	Flood Preparedness & Training				°		°
					°		°
DWR ID	DWR_NA0008_01_s_2013_9						
Action/Comments							
Inspector Comments: District has written response plan and regular flood response training.							

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/29/2014 10/29/2014	Clay Thomas

LM Start	0.00	Rating **	A	Issue No.	199
LM End	6.43	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation				°
					°
DWR ID	DWR_NA0008_01_f_2014_199				
Action/Comments					
Control annual grass and weeds on the levee slopes and easements.					

Photo 1 of 1 : FA_2014_NA0008_256_199_20141030_00370.jpg



Levee mile 5.90, vegetation on levee slopes. Fall 2014.

LM Start	0.25	Rating **	U	Issue No.	192
LM End	0.25	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.722222 °	38.722222 °
				-121.666357 °	-121.666357 °
DWR ID	DWR_NA0008_01_f_2014_192				
Action/Comments					
Inspector Comments: FS_ID:13203					
EP_NO: 9302					
Repair Type: Urgent					
Crossing Status: Found					
UCIP Comments: Pipe completely rusted through on LS slope of levee at toe/headwall of concrete distribution box. Pipe needs replacement or proper abandonment. Pipe not visible at outlet.					
FIELD_STRUCT_DESC: 36-inch pipe through the levee, 24.0 feet below the crown. Slide gate on the waterward end. 12'X6' Concrete box on the landward end (Permit No. 9302-Elliott). Originally included in O+M manual (1953).					
FS Date: 4/5/2013					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/29/2014 10/29/2014	Clay Thomas

LM Start	0.88	Rating **	M	Issue No.	193
LM End	0.88	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.727869 °	38.727869 °
				-121.674875 °	-121.674875 °
DWR ID	DWR_NA0008_01_f_2014_193				
Action/Comments					
Inspector Comments: FS_ID:11064					
EP_NO: 9302					
Repair Type: Non-Urgent					
Crossing Status: Found					
UCIP Comments: Pipe exposed on WS slope in trench may need to be backfilled to prevent erosion under pipe.					
FIELD_STRUCT_DESC: 20-inch steel irrigation pipe through the levee, 8.8 feet below the crown. Pump on steel pile structure at WS toe.					
Siphon breaker in 12-inch steel riser on LS slope. Possible butterfly valve at LS toe. (Permit No. 9302-Elliott 1974), Originally included in O+M manual (1953).					
FS Date: 4/5/2013					

No Photos

LM Start	1.16	Rating **	M	Issue No.	194
LM End	1.16	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.730275 °	38.730275 °
				-121.678975 °	-121.678975 °
DWR ID	DWR_NA0008_01_f_2014_194				
Action/Comments					
Inspector Comments: FS_ID:11065					
EP_NO: 9305					
Repair Type: Non-Urgent					
Crossing Status: Found					
UCIP Comments: Slope on WS shoulder appears to be eroding at pipes exit from levee. 36-inch conc riser on LS is filled with mud.					
FIELD_STRUCT_DESC: 10-inch pipe through the levee, 5.8-feet below the crown. Pump at the waterward toe. 36-inch Concrete standpipe at the landward toe (Permit No. 9305-Bacchini). 5-inch steel-pipe sleeved through 10-inch pipe. Annular space Grouted. (Permit No. 6076-Bacchini). Originally included in O+M manual (1953).					
FS Date: 4/5/2013					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/29/2014 10/29/2014	Clay Thomas

LM Start	1.61	Rating **	M	Issue No.	195
LM End	1.61	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.735399 °	38.735399 °
				-121.684058 °	-121.684058 °
DWR ID	DWR_NA0008_01_f_2014_195				
Action/Comments					
Inspector Comments: FS_ID:13204 EP_NO: 9302 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Space between 16-inch and 24-inch pipe should be grouted. There is no pump on stand at WS toe. FIELD_STRUCT_DESC: 24-inch steel pipe through the levee, 5.9-feet below the crown. 16-inch steel pipe sleeved through this pipe. No visible control valves. Pump on pile structure in stream. Siphon breaker on the landward slope. Discharges into concrete irrigation ditch off the landward toe (Permit No. 9302-Elliott). Originally included in O+M manual (1953). FS Date: 4/5/2013					

No Photos

LM Start	2.61	Rating **	M	Issue No.	196
LM End	2.61	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.747110 °	38.747110 °
				-121.694415 °	-121.694415 °
DWR ID	DWR_NA0008_01_f_2014_196				
Action/Comments					
Inspector Comments: FS_ID:11067					
EP_NO: 9307					
Repair Type: Non-Urgent					
Crossing Status: Found					
UCIP Comments: Siphon breaker on LS buried or broken off and missing.					
FIELD_STRUCT_DESC: 1 of 2: 14-inch pipe through the levee, 5.4-feet below crown. Pump house on pile structure at the landward toe					
Siphon breaker on the landward slope. Service pole and anchor at landward toe (Permit No. 9307- Lowe). Originally included in O+M manual (1953).					
FS Date: 4/5/2013					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	--	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/29/2014 10/29/2014	Clay Thomas

LM Start	2.61	Rating **	M	Issue No.	197
LM End	2.61	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.747204 °	38.747204 °
				-121.694440 °	-121.694440 °
DWR ID	DWR_NA0008_01 f _ 2014_197				

No Photos

Action/Comments					
Inspector Comments: FS_ID:13205 EP_NO: 9307 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Walkway to actuator slide gate is missing. No method of actuating slide gate. FIELD_STRUCT_DESC: 2 of 2: 4-foot x 4-foot concrete box culvert through the levee, 23 feet below the crown. Walkway to slide gate on the waterside end, concrete headwalls on both ends. Service pole and anchor at landward toe. Concrete headwalls on both ends (Permit No. 9307- Lowe). FS Date: 4/5/2013					

LM Start	2.61	Rating **	A/W	Issue No.	19
LM End	2.61	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Cracking			38.747218 °	38.747218 °
				-121.694450 °	-121.694450 °
DWR ID	DWR_NA0008_01 f _2013_19				

Action/Comments					
Monitor and have inspected by geotechnical engineer. Inspector Comments: Cracks along crown and down waterside slope.					

Photo 1 of 1 : FA_2014_NA0008_256_19_20141014_00003.jpg



Cracking along the waterside shoulder of the crown the length of 20 feet.
Fall 2013

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/29/2014 10/29/2014	Clay Thomas

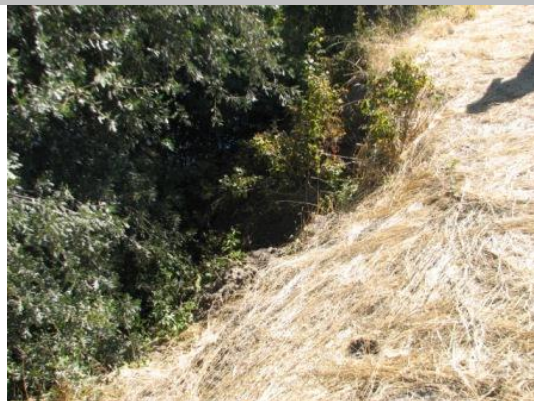
LM Start	3.26	Rating **	M	Issue No.	1
LM End	3.26	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	USACE Erosion Survey			38.758432 °	38.759332 °
				-121.695158 °	-121.696063 °
DWR ID	DWR_NA0008_01_f_2014_1				
Action/Comments					
Inspector Comments: 2011 - Toe scour and bank slumping. 2013: Site is part of the extended inventory, last inspected 2011. [2013 Site ID: KLR_3-5_R]					

No Photos

LM Start	3.54	Rating **	M	Issue No.	20
LM End	3.54	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.759910 °	38.759910 °
				-121.696920 °	-121.696920 °
DWR ID	DWR_NA0008_01_f_2013_20				
Action/Comments					
Note and monitor erosion site.					

LM Start	3.54	Rating **	M	Issue No.	20 (cont)
LM End	3.54	Issue Type +	Ma	Location *	WS

Photo 1 of 2 : FA_2014_NA0008_256_20_20141014_00004.jpg



Another view of the erosion cutting into the slope. Fall 2013

Photo 2 of 2 : FA_2014_NA0008_256_20_20141014_00005.jpg



Deep erosion at the bottom of the waterside slope 3-4 foot cut. Fall 2013

*** Location**
LS : Land Side N/A : Not Applicable
WS : Water Side
CR : Crown

**** Rating**
A : Acceptable N : Not Inspected/Rated
M : Minimally Acceptable C : Corrected
U : Unacceptable A/W : Acceptable but Monitor & Maintain

+ Issue Type
Ma : Maintenance Deficiency
Ob : Design & System Obsolescence
En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/29/2014 10/29/2014	Clay Thomas

LM Start	3.86	Rating **	M	Issue No.	2
LM End	3.86	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	USACE Erosion Survey			38.764037 °	38.764905 °
				-121.701434 °	-121.702074 °
DWR ID	DWR_NA0008_01_f_2014_2				
Action/Comments					
Inspector Comments: 2011 - Toe erosion and erosion pockets from tree popouts. More tree popouts are expected due to the eroding toe. 2013: Site is part of the extended inventory, last inspected 2011. [2013 Site ID: KLR_3-9_R]					

No Photos

LM Start	4.95	Rating **	M	Issue No.	198
LM End	4.95	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.777566 °	38.777566 °
				-121.707591 °	-121.707591 °
DWR ID	DWR_NA0008_01_f_2014_198				
Action/Comments					
Inspector Comments: FS_ID:11264					
EP_NO: 4443					
Repair Type: Non-Urgent					
Crossing Status: Found					
UCIP Comments: Pipe does not have adequate cover at crown.					
FIELD_STRUCT_DESC: 16-inch drainage pipe through the levee 0.5-					
feet below the crown. Pad constructed over pipe for vehicular crossing.					
Pump on metal structure on the landward side, flap gate on the					
waterside end, Siphon breaker on the pipe on the waterside. Slide gate					
located on LS toe. (Permit No. 4443-RD 730). Design drawings					
available in permit.					
FS Date: 4/5/2013					

No Photos

LM Start	6.17	Rating **	M	Issue No.	7
LM End	6.41	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.790007 °	38.792433 °
				-121.723308 °	-121.726463 °
DWR ID	DWR_NA0008_01_s_2012_7				
Action/Comments					
Equipment					

Photo 1 of 2 : FA_2014_NA0008_256_7_20141014_00001.jpg



Equipment and irrigation pipe lays on the landside levee slope. Fall 2013

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/29/2014 10/29/2014	Clay Thomas

LM Start	6.17	Rating **	M	Issue No.	7 (cont)
LM End	6.41	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.790007 °	38.792433 °
				-121.723308 °	-121.726463 °
DWR ID	DWR_NA0008_01_s_2012_7				
Action/Comments					
Equipment					

Photo 2 of 2 : FA_2014_NA0008_256_7_20141014_00002.jpg



A current view of the equipment on the levee slope. Spring 2014

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2014 Levee Inspection Results

Knights Landing Ridge Drainage District

Waterway			Bank	Unit Miles
Unit No. 02 Knights Landing Ridge Cut			Left	6.03
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			M	
Date of Inspection	03/25/2014 - 03/25/2014		10/29/2014 - 10/29/2014	
DWR Inspector	John Williamson		Clay Thomas	
Accompanied By	Chad Navarrot RD 108		Chad Navarrot RD 108	

Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/29/2014 10/29/2014	Clay Thomas

LM Start	0.00	Rating **	A	Issue No.	13
LM End	5.88	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation				°
					°
DWR ID	DWR_NA0008_02_f_2014_13				
Action/Comments					
Control annual grass and weeds on the levee slopes and easements.					

Photo 1 of 1 : FA_2014_NA0008_257_13_20141030_00016.jpg



Levee mile 5.88, vegetation on levee slopes. Fall 2014.

LM Start	1.00	Rating **	M	Issue No.	7
LM End	1.00	Issue Type +	En	Location *	LS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.733120 °	38.733120 °
				-121.679383 °	-121.679383 °
DWR ID	DWR_NA0008_02_f_2014_7				
Action/Comments					
Inspector Comments: FS_ID:11307 EP_NO: 9320 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Appears abandoned as pump is missing from platform. FIELD_STRUCT_DESC: 16-inch steel pipe through the levee 2.8-feet below the crown. Discharges into 36-inch concrete standpipe at levee toe. Pump on steel pile structure in stream with metal walkway. Two service poles on the waterward slope. (Permit No. 9320-Pollock) Originally included in O+M manual 1953. FS Date: 4/9/2013					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/29/2014 10/29/2014	Clay Thomas

LM Start	1.91	Rating **	U	Issue No.	8
LM End	1.91	Issue Type +	En	Location *	LS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.743768 °	38.743768 °
				-121.689185 °	-121.689185 °
DWR ID	DWR_NA0008_02_f_2014_8				
Action/Comments					
Inspector Comments: FS_ID:11306 EP_NO: 9320 Repair Type: Urgent Crossing Status: Found UCIP Comments: Pipe at flap gate rusted through at WS toe. Flap gate does not function properly. FIELD_STRUCT_DESC: 1 of 2: 12-inch pipe through the levee, 4-feet below the crown. Flap gate on waterward end at concrete headwall, siphon breaker in 2-inch CM pipe riser on the landward shoulder. Vertical pump unit on concrete foundation in irrigation ditch at the LS toe. (Permit No. 9320-Pollock) Originally included in O+M manual 1953. FS Date: 4/9/2013					

No Photos

LM Start	2.28	Rating **	M	Issue No.	9
LM End	2.28	Issue Type +	En	Location *	LS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.748282 °	38.748282 °
				-121.692652 °	-121.692652 °
DWR ID	DWR_NA0008_02_f_2014_9				
Action/Comments					
Inspector Comments: FS_ID:11304 EP_NO: 15517 Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: Pipe alignment should be marked at levee crossing. FIELD_STRUCT_DESC: 8-inch natural gas pipeline through the levee 50-feet below the crown. (Permit No. 15517, 1991). Design drawings available in permit. FS Date: 4/9/2013					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/29/2014 10/29/2014	Clay Thomas

LM Start	2.30	Rating **	M	Issue No.	10
LM End	2.30	Issue Type +	En	Location *	LS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.748505 °	38.748505 °
				-121.692697 °	-121.692697 °
DWR ID	DWR_NA0008_02_f _ 2014_10				
Action/Comments					
Inspector Comments: FS_ID:11303 EP_NO: 13164 Repair Type: Non-Urgent Crossing Status: Not Found UCIP Comments: Need to have pipe located and marked properly if still in use. FIELD_STRUCT_DESC: 4-inch steel natural gas collection pipe through the levee 3.2-feet below the crown. (Permit No. 13164, 1981). Design drawings available in permit. FS Date: 4/9/2013					

No Photos

LM Start	2.74	Rating **	M	Issue No.	2
LM End	2.74	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	USACE Erosion Survey			38.754899 °	38.757925 °
				-121.692653 °	-121.693048 °
DWR ID	DWR_NA0008_02_f_2014_2				
Action/Comments					
Inspector Comments: 2006 - The whole levee toe area is slowly slumping into the channel (creep) due to dewatering and poor slope soils. Occasional piping in the levee slope evident as well. Pistol-butted trees at the levee toe indicate slow retreat. 2011 - Multiple scallops throughout the site and slumping of the toe. 2013: Site is part of the extended inventory, last inspected 2011. [2013 Site ID: KLR_3-0_L]					

No Photos

LM Start	3.01	Rating **	M	Issue No.	3
LM End	3.01	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	USACE Erosion Survey			38.758587 °	38.760053 °
				-121.693359 °	-121.694686 °
DWR ID	DWR_NA0008_02_f_2014_3				
Action/Comments					
Inspector Comments: 2006 - The whole levee toe area is slowly slumping into the channel (creep) due to dewatering and poor slope soils. Occasional piping in the levee slope evident as well. Pistol-butted trees at the levee toe indicate slow retreat. 2011 - Slumping of the levee toe. 2013: Site is part of the extended inventory, last inspected 2011. [2013 Site ID: KLR_3-1_L]					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/29/2014 10/29/2014	Clay Thomas

LM Start	3.05	Rating **	U	Issue No.	230
LM End	3.05	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.759112 °	38.759112 °
				-121.693638 °	-121.693638 °
DWR ID	DWR_NA0008_02_f_2013_230				
Action/Comments					
Note and monitor erosion site.					

Photo 1 of 1 : FA_2014_NA0008_257_230_20141014_00011.jpg



Erosion at the bottom of the slope. It appears that a fallen tree has caused a sink hole. Fall 2013

LM Start	3.08	Rating **	U	Issue No.	229
LM End	3.08	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.759542 °	38.759542 °
				-121.694007 °	-121.694007 °
DWR ID	DWR_NA0008_02_f_2013_229				
Action/Comments					
Note and monitor erosion site. Inspector Comments: Erosion is undermining large oak tree and is growing.					

Photo 1 of 2 : FA_2014_NA0008_257_229_20141014_00009.jpg



Another view of the vertical cut at the bottom of the slope. Fall 2013

LM Start	3.08	Rating **	U	Issue No.	229 (cont)
LM End	3.08	Issue Type +	Ma	Location *	WS

Photo 2 of 2 : FA_2014_NA0008_257_229_20141014_00010.jpg



Waterside eroision vertical cut at bottom of slope. Fall 2013

*** Location**
LS : Land Side N/A : Not Applicable
WS : Water Side
CR : Crown

**** Rating**
A : Acceptable N : Not Inspected/Rated
M : Minimally Acceptable C : Corrected
U : Unacceptable A/W : Acceptable but Monitor & Maintain

+ Issue Type
Ma : Maintenance Deficiency
Ob : Design & System Obsolescence
En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/29/2014 10/29/2014	Clay Thomas

LM Start	3.63	Rating **	M	Issue No.	4
LM End	3.63	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	USACE Erosion Survey			38.765522 °	38.767336 °
				-121.700608 °	-121.701023 °
DWR ID	DWR_NA0008_02_f_2014_4				
Action/Comments					
Inspector Comments: 2011 - The toe has eroded away and there are a few scallops from bank slumping. 2013: Site is part of the extended inventory, last inspected 2011. [2013 Site ID: KLR_3-7_L]					

No Photos

LM Start	3.73	Rating **	C	Issue No.	16
LM End	3.73	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			38.766933 °	38.766933 °
				-121.700894 °	-121.700894 °
DWR ID	DWR_NA0008_02_s_2014_16				
Action/Comments					
Trees / Woody Vegetation					

No Photos

LM Start	4.35	Rating **	M	Issue No.	5
LM End	4.35	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	USACE Erosion Survey			38.775271 °	38.778115 °
				-121.703685 °	-121.706195 °
DWR ID	DWR_NA0008_02_f_2014_5				
Action/Comments					
Inspector Comments: 2011 - This site is the downstream section of the old KLR 5.3L site. Levee toe is slowly retreating. Cracking on top of the levee may indicate potential mass movement. 2013: Site is part of the extended inventory, last inspected 2011. [2013 Site ID: KLR_4-7_L]					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/29/2014 10/29/2014	Clay Thomas

LM Start	4.65	Rating **	U	Issue No.	15
LM End	4.65	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			38.778822 °	38.778822 °
				-121.706515 °	-121.706515 °
DWR ID	DWR_NA0008_02_s_2014_15				
Action/Comments					
Trees / Woody Vegetation					

Photo 1 of 1 : FA_2014_NA0008_257_15_20141014_00004.jpg



A cottonwood tree may have been struck by lightning. The tree is split into tree parts. Spring 2014

LM Start	4.78	Rating **	A/W	Issue No.	228
LM End	4.78	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Cracking			38.780080 °	38.780080 °
				-121.708137 °	-121.708137 °
DWR ID	DWR_NA0008_02_f_2013_228				
Action/Comments					
Monitor and have inspected by geotechnical engineer.					

No Photos

LM Start	4.86	Rating **	A/W	Issue No.	226
LM End	4.88	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Cracking			38.780858 °	38.781102 °
				-121.709093 °	-121.709385 °
DWR ID	DWR_NA0008_02_f_2013_226				
Action/Comments					
Monitor and have inspected by geotechnical engineer.					

Photo 1 of 1 : FA_2014_NA0008_257_226_20141014_00006.jpg



Cracking on the landside is 3-4 inches wide and 12 inches deep. Fall 2013

* Location		** Rating		+ Issue Type	
LS : Land Side N/A : Not Applicable		A : Acceptable		Ma : Maintenance Deficiency	
WS : Water Side		M : Minimally Acceptable		Ob : Design & System Obsolescence	
CR : Crown		U : Unacceptable		En : Enforcement	
		N : Not Inspected/Rated			
		C : Corrected			
		A/W : Acceptable but Monitor & Maintain			

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/29/2014 10/29/2014	Clay Thomas

LM Start	4.86	Rating **	A/W	Issue No.	227
LM End	4.86	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Cracking			38.780858 °	38.780858 °
				-121.709095 °	-121.709095 °
DWR ID	DWR_NA0008_02_f_2013_227				
Action/Comments					
Monitor and have inspected by geotechnical engineer.					

Photo 1 of 2 : FA_2014_NA0008_257_227_20141014_00007.jpg



Another view of the cracking on the levee slope. Fall 2013

Photo 2 of 2 : FA_2014_NA0008_257_227_20141014_00008.jpg



Cracking on levee slope 1-2 inches wide and 6 inches deep. Fall 2013

LM Start	5.45	Rating **	M	Issue No.	6
LM End	5.45	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	USACE Erosion Survey			38.786566 °	38.792395 °
				-121.716724 °	-121.724091 °
DWR ID	DWR_NA0008_02_f_2014_6				
Action/Comments					
Inspector Comments: 2011 - This site is the upstream section of the old KLR 5.3L site. Levee toe is slowly retreating. Cracking on top of the levee may indicate potential mass movement. 2013: Site is part of the extended inventory, last inspected 2011. [2013 Site ID: KLR_5-8_L]					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/29/2014 10/29/2014	Clay Thomas

LM Start	5.64	Rating **	M	Issue No.	11
LM End	5.64	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.788662 °	38.788662 °
				-121.718997 °	-121.718997 °
DWR ID	DWR_NA0008_02 f _ 2014_11				

No Photos

Action/Comments					
Inspector Comments: FS_ID:11289 EP_NO: 3671 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Electrical panel missing parts. Siphon breaker missing from pipe on LS. Pipe heavily corroded at outlet with holes present. Appears abandoned-should be abandoned properly. FIELD_STRUCT_DESC: 20-inch steel pipe through the levee, 5.5-feet below the crown. Siphon breaker in a steel pipe riser on the landward slope. Metal cutoff wall. Service pole on the waterward slope. (Permit No. 3671-Wallace Replaced 20-inch pipe at same location in 1961) FS Date: 4/9/2013					

LM Start	6.04	Rating **	M	Issue No.	12
LM End	6.04	Issue Type +	En	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.792661 °	38.792661 °
				-121.724047 °	-121.724047 °
DWR ID	DWR_NA0008_02_s_2014_12				

Action/Comments					
Debris					

Photo 1 of 1 : FA_2014_NA0008_257_12_20141014_00003.jpg



A debris pile is on the waterside levee slope. Spring 2014

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/29/2014 10/29/2014	Clay Thomas

LM Start	6.05	Rating **	M	Issue No.	1
LM End	6.12	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.792735 °	38.792735 °
				-121.724092 °	-121.724092 °
DWR ID	DWR_NA0008_02_s_2012_1				
Action/Comments					
Crops					
Inspector Comments: No access; strawberries are being grown					
landside levee slope and crown					

Photo 1 of 2 : FA_2014_NA0008_257_1_20141014_00001.jpg



Strawberry patch on the levee crown has added other crops on the crown. Fall 2013

LM Start	6.05	Rating **	M	Issue No.	1 (cont)
LM End	6.12	Issue Type +	En	Location *	LS

Photo 2 of 2 : FA_2014_NA0008_257_1_20141014_00002.jpg



Crops (strawberries and berries vines) are planted on the crown with a fence blocking access. Spring 2014

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---